

ENIGMA

A CLOSE CALL FROM DEEP SPACE

A collapsed star, a Black Dwarf dubbed "Enigma", is reckoned to be on a trajectory bringing it within 300,000 kilometres of the Earth in March 2003, perhaps close enough to produce significant climatic and geophysical effects.

by José Chung © 2002

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www.gxo.com/spacejunk/archives

In our obsession with antagonisms of the moment, we often forget how much unites all the members of humanity. Perhaps we need some outside, universal threat to make us recognize this common bond.

I occasionally think how quickly our differences worldwide would vanish if we were facing an alien threat from outside this world.

— Ronald Reagan, President, USA

in Speech to the United Nations General Assembly 42nd session,
September 21, 1987

When Ronald Reagan delivered that speech back in 1987, some people suspected that he might be afflicted with some debilitating mental illness. Later, during the congressional hearings on the Iran–Contra affair, when Ronnie couldn't seem to remember anything, the majority of the public was driven to the same conclusion. And when he was finally diagnosed with Alzheimer's disease, we all felt sad—but justified—in our earlier assessments. Looking back today, you really have to wonder how "disabled" he actually was.

Was Ronnie Right? What Did He Mean Exactly?

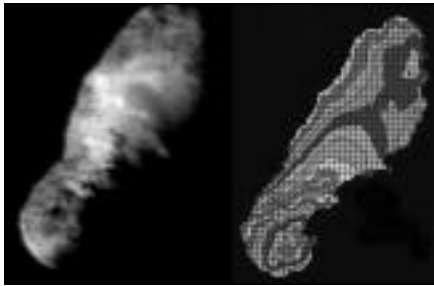
If you've been reading the papers or watching TV lately, then you've probably seen some weird stories. Even the mainstream press has been running odd bits on close asteroid approaches, UFOs and even on how a small asteroid impact could trigger global thermonuclear war. Evidently, this material has somehow made the successful leap from yellow tabloid journalism to *Washington Post* respectability.

As official *GX* [*Graphic Exchange*] chronicler of all things metaphorical, astronomical or conspiratorial, I took it upon myself to get to the bottom of this potentially dirty pile of laundry. That, as I was soon to find out, would be a fitting analogy, as much of the "official" record has clearly been sanitised.

When Reagan made that seemingly bizarre statement at the UN, did he know something that we (the general public) don't know? Was he talking about little green men, or something else?

People have been exploring the universe with telescopes since at least the time of Galileo (though the well-informed will contend that it began much earlier than that), and we've made some thoroughly amazing discoveries. We've plotted the orbits of all the planets in our solar system and the relative position of our galaxy with respect to its neighbours, and we've even made great inroads in determining the ultimate origin of our universe. Three of the most important object types we've come to study are comets, asteroids and the stars (including our Sun), each of which presents unique wonders—and potentially fatal dangers.

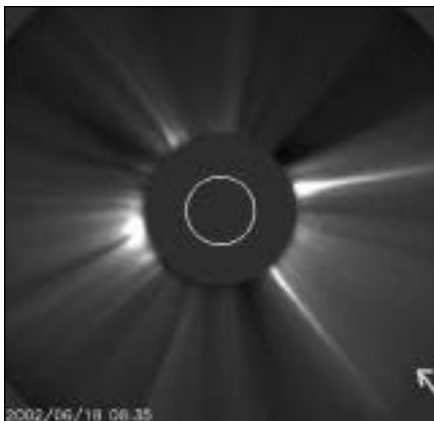
It is postulated that the dinosaurs, which once roamed and ruled the Earth, were wiped out almost entirely by a single asteroid strike about 65 million years ago in the vicinity of the Yucatan Peninsula, off the coast of present-day Mexico. The planet is pocked with evidence of other similar impacts, such as Chesapeake Bay (USA) and the Manicouagan Crater (Canada). These craters, made by asteroids measuring between 5 and 15 kilometres in diameter, wiped out the considerable majority of life on Earth, but smaller objects are constantly bombarding the planet with less devastating results. In 1908, a small asteroid (measuring about 60 metres across) exploded in the atmosphere above Tunguska, Siberia, and flattened 2,000 square kilometres of forest—and probably a few million caribou along with a number of hunters and trappers.



Comet Borrelly (topographic view at right)
(Photo credit - NASA, Deep Space 1)



The Sun expels some coronal mass.
(Photo credit - SOHO)



"Wimpy" (below right near arrow point)
(Photo credit - SOHO, 2002/06/18, 08:35)



Orbital path of object 2002 NY40 before
closest approach (above) and after (below)
(Photo credit - NASA, JPL, NEO Program)



The Moon may have been formed when a comet, perhaps 1,500 kilometres (or more) in diameter and travelling at a tremendous speed, smashed through the Earth in its early years. At the same time, it may have deposited the necessary building blocks of life here.

When comet Shoemaker-Levy 9 broke up and crashed into Jupiter in 1994, it left Earth-sized marks on the surface of the giant planet and released forces equivalent to millions of Hiroshima-sized explosions.

The Sun, which reverses its polarity every 11 years, is as capable of bringing destruction as it is of spreading nurturing warmth. Over a period of many solar cycles, the Sun's impact on its satellites (of which we are one) will vary, bringing on widespread glacial periods or seemingly interminable heat-related droughts.

We've now been in an extended Solar Maximum period for longer than anticipated. It was projected to have ended about a year ago [mid-2001], but con-

tinuing activity has created a stark double-peak in this solar cycle. Some of the solar flares and coronal mass ejections (CMEs) have been remarkable and make for great on-line viewing. The corona, which is the outermost layer of the Sun, sometimes throws off great heaps of material at speeds of up to 1,000 kilometres per second.

When solar flares and CMEs pass our way, they can sometimes even cause damage to sensitive satellites. The disruption of power grids and communication networks by powerful solar flares is well documented. And it's not so surprising once you consider that an X3-class solar flare contains as much energy as four trillion tons of TNT.

Obviously Reagan was no "rocket scientist", but he did have access to considerable pools of scientific data and his very own science advisers. Not everyone is so lucky. You'll have to settle for me.

Was Reagan simply trying to scare the nations of the world into cooperating with one another? Did he have some other mysterious New World Order

agenda? Well, perhaps we shouldn't give him too much credit. I prefer to believe that he had access to secret information, and it has only lately become clear what that was.

The Truth Comes Out—Finally

In researching material for this article, I groped my way through an endless list of websites dedicated to all manner of astronomical media. Only after having found some of the most obscure NASA interfaces did I manage to determine that rarely is everything published for the consumption of the average netizen.

Although I've long known that the government doesn't tell us everything, I never really knew how much we were missing when it comes to cosmic intelligence.

In mid-June, a small asteroid (named 2002 MN)

Several years ago,
the Russian government held
an urgent meeting (attended by
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"The 2003 Problem".

made a close flyby of our little planet. It only measured about 120 metres across — barely enough to take out a large metropolitan city and its suburbs. It was the second-

closest encounter ever recorded without Earth actually being hit in the process. The trouble is that no one, not even NASA, noticed it until it had already whipped by. In galactic terms, 120,000 kilometres (the estimated miss distance) is barely a whisker. Okay, so they missed it. At least they tried, you say? Well, I say that they're not trying hard enough. What they didn't tell us is that another asteroid passed by two days later—at an even closer distance. Unfortunately, you won't find that posted anywhere.

The US Federal Emergency Management Agency was recently assigned a mandate to construct emergency "tent cities" by January 2003, presumably to house people displaced by a major terrorist attack. These "cities" will be capable of accommodating hundreds of thousands of people. But are we certain that the proposed disaster will be terrestrial in origin?

The C2 image at far left centre is a picture of the asteroid that whizzed by soon after 2002 MN made its close approach. Since this one is not

acknowledged, I've decided to name it myself. How about "Wimpy"?

Several years ago, the Russian government held an urgent meeting (attended by top officials and scientists) to discuss what they termed "The 2003 Problem". Few details are available, but it apparently had something to do with a massive depopulation of the Earth.

Since then, several "Earth defence" initiatives have been undertaken by various groups to improve the forecasting of close approaches by asteroids and comets.

One of the most prominent of these groups is a subset of NASA's Jet Propulsion Laboratory, called the NEO (Near Earth Objects) Program. The NEO website is one of the best resources available for monitoring and identifying all our potentially hazardous neighbours. It even has a Java-based orbit simulation program which allows you to view the positions of asteroids and comets as they swing through the solar system.

The two images at bottom left show the orbital path (or ephemeris) of a recently discovered object, 2002 NY40. The top one shows the relative positions of Earth and NY40 one week before their closest approach. The second image shows where they were a week later. Don't get too upset if you can't see one of the dots—that's just because they're virtually on top of each other.

This encounter posed less danger for the Earth than it did for our Moon. You see, the distance by which the asteroid was scheduled to miss us (given NEO's own error allowance) was almost as close as the distance between us and the Moon. Actually, as it turned out, the object succeeded in missing the Moon by some 42,000 kilometres. Pretty close. The figures displayed on various official websites disclose the amount by which it missed Earth, but make no mention of the object's proximity to the Moon during its flyby.

Two of the most interesting SOHO (an acronym for Solar and Heliospheric Observatory) views are those which may be had through the LASCO (Large Angle Spectrometric Coronagraph) C2 (close-up) and C3 (wider-angle) scopes. There is a series of C3 images (see <http://www.gxo.com>) showing the position of an interesting object which passed through its field of view in late May. This would normally be less than remarkable (probably just another comet), except that NASA will not admit to the existence of this particular object. In fact, the last nine frames of this animated sequence (which may also be viewed at <http://www.gxo.com>) were excised and never posted by the SOHO people. Datalogs indicate that the images were actually made, but never posted to the website. The catalog numbers of the missing images are: 33090948.fts – 33090956.fts.

The reason that these images were never posted is that they would show this object brightening to the extent that it would

have become the shiniest thing in the field of view, except for the Sun and two planets. That's pretty bright, especially for something that doesn't exist.

High-resolution images are often stored in FITS format, so if you manage to download any you'll need something with which to open and view them. An old copy of Live Picture would be great if you have it, but another option would be to grab a copy of a FITS browser or viewer software from one of the NASA sites, e.g., <http://fits.gsfc.nasa.gov/software.html>.

Once again, since there's no "official" confirmation of the object, I'll have to name it myself. We'll call this one "Enigma", because it acts in a very unpredictable manner. Not least among its strange behaviours is that it passes through our system in a direction contrary to all other solar-orbiting objects.

When I first spied Enigma emerging out of the inky depths of space on May 27, 2002, I thought that I had found a new comet

and reported it to the powers-that-be at SOHO the following day. When I noticed no discernible tail on this "comet", I began to think that I had made some sort of gigantic error. Maybe this was a planet. After all, that seemed to be the consensus of the people who tried to talk me out of believing that this was a comet.

Two people told me that it was Mercury—a possibility I quickly discounted, because Mercury was visible in the field of view at the same time. Then I was told that it was Mars. But Mars hadn't yet entered the field of view—and wouldn't for several more weeks. And it wasn't Saturn either, because Saturn entered the frame a few days later. All the other planets were out of range. So, it had to be a comet—or one really big asteroid.

Asteroid, I thought. Well, there was no tail, so that was plausible. However, if it were

an asteroid, it would have to be about 8 to 12 kilometres wide and be moving at about 28 km/s relative to our own movement.

Working with no assistance from NASA and with only a single point of reference (LASCO C3 images made over a period of five days), I found it difficult to compute an accurate trajectory for the object. It was then that I realised that there were two scenarios developing. It was either an 8 to 12-kilometre-wide asteroid—or something 100 times that large (about one-quarter the size of our Moon) travelling at a fantastic rate of speed, perhaps at more than 100 kilometres per second!

That simply didn't fit anything I had learned about up until that point, and there was still the matter of its contrary motion. This thing seemed to be barging its way into our solar system without a care for any of the traffic signals.

I didn't know what to believe until I found the "xxx" image (centre right) in a SOHO-related database. It appeared to be a close-up radiotelescope shot of the object, but it bore no name

THE BLACK DWARF

The Black Dwarf is a smaller cousin of the Brown Dwarf, situated by diameter between the Jupiter-sized (or larger) "brown" variety and the much smaller (but incredibly more dense) neutron family of star-type objects (quasars, pulsars, etc.).

By one current theory, black dwarfs are cooler and denser than most other varieties of star matter, and are thought to have a higher gross specific gravity (sg) than our Sun, albeit in a much smaller package and with a significantly lower total mass. It is theorised to be one of the less common mass configurations in stellar circles, since it is likely the by-product of a short-life star of minimal relative mass which reached "ignition" primarily due to its proximity to other stars or alternative energy sources, rather than by accumulation of sufficient critical mass.

Black dwarfs may also be some of the oldest star-related phenomena still extant. The rarity of these objects may be due to their probable tendency to intersect with other bodies during transitional orbits around higher-mass objects.

in the database log, save "xxx" and the capture date.

What Happens Next?

We wait. If the orbital diagram (bottom right) is correct, we should begin to get some interesting clues very shortly. But you don't have to take my word for any of this. You can check it all out for yourself on-line, though you may have to do some digging if you want to find the really good nuggets of information.

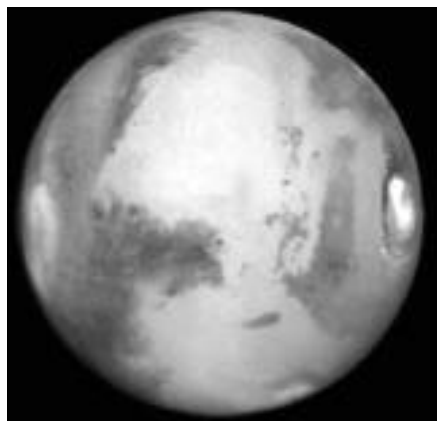
Here's the schedule so far:

August to November 2002:

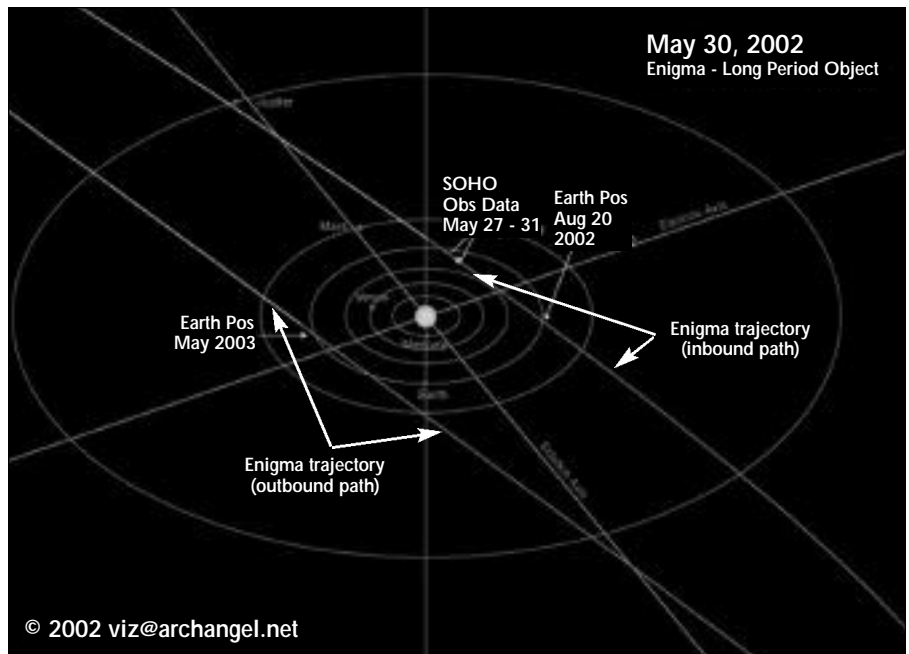
Increased asteroid traffic and the discovery of several new infrared sources of radiation, including previously undiscovered supernovae, as we pass through the area of space travelled by Enigma during late May and early June 2002. [Author's note: This first passage was relatively inconsequential and occurred very close to the time of the SOHO observation, with the point of closest solar approach being June 5, 2002.]

[Author's update, as at early January 2003: An unexpected shift in the Interplanetary Magnetic Field (IMF) occurred between August 1 and 4, and created fantastic auroras across North America; scientists at NASA were baffled. A new nova was discovered on September 14, and the next day a "red comet", approx. 400 metres in diameter, made its closest approach to Earth at just over 13,000 kilometres mean distance, passing barely south of the equator to our relative east. There was a good deal of meteoric fireball activity during November over much of the American southwest as well as over South-East Asia and parts of Australia. Also, there was that sensational display over Turkey on November 1st...]

December 2002 to February 2003 : Fewer space debris alerts, but an uptick in stormy weather as the object begins its second approach to the Sun. Given that this puppy weighs in at roughly 18 times the mass of the Earth (in a package only about a quarter the size of the Moon), it is expected to have predominant gravitational effects upon our terrestrial mood. This should be especially true of our weather, which is



Mars
(Photo credit - Hubble Space Telescope)



The Enigma trajectory is represented by the dark/light-blue-coloured line segments. The dark blue portion of the line defines the portion of the orbit below the Earth-relative ecliptic, while the lighter blue segments show where Enigma rises above the ecliptic. There are two continuous lines depicted, the upper one of which is the original in-bound "track". The lower line shows the exit path.

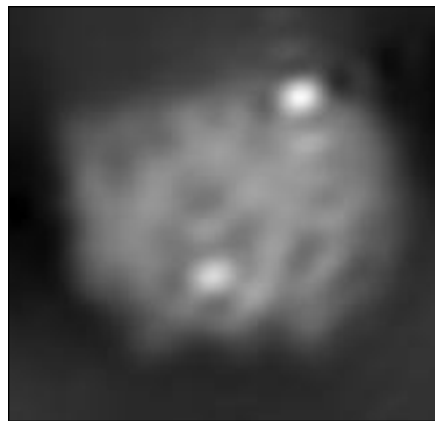
strongly perturbed by the fractal-like influence of coriolis-type energy events, e.g., the close proximity of a deep gravity object which also happens to have a strong IR energy signature.

[Author's update: There was a close call from an asteroid, designated 2002 XV90, that made its closest approach on December 11, although it was only noticed two days afterwards. This approx. 50-metre-diameter object passed Earth at 0.3 lunar distances, or 116,600 kilometres—one of the closest flypasts ever recorded.]

Early to Mid March 2003: Passing just south of the main ecliptic plane of our solar system at a point very close to our own position, the collapsed star (or Black Dwarf) known as Enigma will pass within 300,000 kilometres of our planet at a speed of about 120 kilometres per second, trailing a tail of debris and cinder-like iron and carbon filaments. When these strike the atmosphere, they will almost immediately oxidise and precipitate in the form of red rain. This may also occur during November 2002 [it did happen over India], as it did during the month of August, when several reports of this phenomenon came in from Vietnam and India. Red fireballs streaking across the sky are also to be expected as larger pieces of debris brush through our resistant atmosphere.

More Surprises to Come

While some have predicted that the poles of the Earth will shift in the [northern] Spring of 2003 with the arrival of a Brown Dwarf star (variously referred to as Planet X, Marduk and Nibiru), I can find little direct evidence to support that contention. But I feel that the case for



Source unknown; unknown type
June 5, 2002, at 12:04 hrs

Enigma is much stronger, as we have NASA's own evidence to back up the theoretical base of my speculation.

At the end of this article, you'll find a table of the best space imagery resources on the Internet. Many of the government-run programs (NASA, etc.) will also permit their images to be used royalty-free, with some of them being made available in both low and high resolution.

So whether you're interested in scientific evidence corroborating the predictions of Nostradamus or searching for great Hubble photographs, the Internet is definitely the place to be.

Reagan may have been right after all. We may indeed be facing a threat from outside our world. And although the absence of alien beings in this scenario may disappoint diehard ufologists, the potential consequences are no less dire.

This article ends here on paper, but there are plenty more mysteries—including controversial information recently published on a "red comet" sighting and what it may mean as we get closer to [northern] Spring 2003. [Author's update: It is my belief that the object is trapped in an Earth-centric orbit, and will be for the next

few months at least. As at early January, no NASA observations on this red comet have been posted in the public domain.]

If you'd like to see Wimpy and Enigma in full motion, along with a few other curious items, go to the *GX* website at <http://www.gxo.com> and follow the link from the October 2002 issue.

And tomorrow is another day...or so we hope.

About the Author:

José Chung is a well-known Canadian expert in digital imaging technologies, including the complex data systems designed to automate their creation and manipulation. Mr Chung is also involved in the exploration of Unified Field phenomena, particularly in the area of macro analogies for quantum mechanical effects. Though originally content with the quality and volume of space-related information dispensed by "official" sources, he gradually waxed more dissatisfied as increasing amounts of vital information began to disappear from publicly accessible databases.

This article is the result of following one of those broken threads, which just happened to lead to many more loose ends. It was first published in the October 2002 issue of *Graphic Exchange (GX)*, based in

Toronto, Ontario, Canada. You can visit *GX* at <http://www.gxo.com>, and the José Chung story archives at <http://www.gxo.com/spacejunk/archives>.

PLANET X CONFUSION

While I do believe that we will be having a close encounter with a high-speed celestial body in early 2003, much of the hype surrounding Planet X actually stems—as you will find if you actually read the linked docs at Harvard and other sites—from the search for a 10th planet, somewhere beyond the orbit of Pluto. The "Planet X" moniker was in wide use in the heady days after the (confirmed) discovery of Pluto, when the prospect of successfully reaching out to find the "next" planet seemed almost tactile. And imminent.

Is it possible that a high-mass body could be floating back and forth between our Sun and a massive Brown Dwarf star several trillion miles distant? I'm satisfied that the possibility exists, because such an orbit would break no known natural laws. This motion could be enabled by the evolution of a "helical homing orbit".

I'm inclined to believe that such a body would be considerably smaller and less massive than popular theory dictates. This doesn't relieve us of potential peril to any great extent, because the body that I do envision is much more massive than our own planet, with a far greater density (sg).

— José Chung, December 2002

References

The Indispensable Astronomy Website List

1) Official Astronomy Sites

- Near Earth Objects (asteroids, comets)
<http://neo.jpl.nasa.gov>
<http://newton.dm.unipi.it/cgi-bin/neodys/neoibo>
<http://cfa-www.harvard.edu/iau/mpc.html>
- SOHO (Solar and Heliospheric Observatory)
<http://sohowww.nascom.nasa.gov>
- SOHO Databases
Intermediate: http://sohowww.nascom.nasa.gov/cgi-bin/summary_query_form
Expert: <http://sohodata.nascom.nasa.gov/cgi-bin/gui>
- Hubble Space Telescope
<http://www.hubblesite.org>
- General Space and Astronomy
NASA: <http://ssd.jpl.nasa.gov>
NASA: <http://science.msfc.nasa.gov>
PIXIE: <http://muir.spasci.com>
- Space Station:
<http://spaceflight.nasa.gov/realdata/sightings>

• Auroras:

http://science.nasa.gov/spaceweather/aurora/gallery_0laug02.html

2) Not-so-Official Sites

- Everything weird: <http://www.cyberspaceorbit.com>
- Many good answers: <http://www.badastronomy.com>
- Spaceweather:
<http://www.spaceweather.com>
<http://206.131.246.33/sun/noaa.html>
<http://rsd.gsfc.nasa.gov/goes>
- FITS Viewing software: <http://fits.gsfc.nasa.gov/software.html>
- Planet X, Nibiru, Marduk, etc.:
<http://www.mgr.org/PlanetX.html>
<http://www.zetataalk.com>
- UFO Stuff:
<http://www.mimicmedia.com/ufo/Ufomiscfilelist.htm>
<http://www.siriusufo.org/engnews/haber.htm>
- Graphic Exchange Online: More data pertinent to this article (MPEGs, JPEGs, etc.):
<http://www.gxo.com/spacejunk>